

IN THE CLAIMS:

The text of all pending claims, (including withdrawn claims) is set forth below. Cancelled and not entered claims are indicated with claim number and status only. The claims as listed below show added text with underlining and deleted text with ~~strikethrough~~. The status of each claim is indicated with one of (original), (currently amended), (cancelled), (withdrawn), (new), (previously presented), or (not entered).

1. (currently amended) An object collaboration apparatus operated in accordance with a message and action relationship, comprising:

a message receiving part that allows each object to monitor and capture a message transmitted among objects on a network, ~~said message including a message type and a message body~~ said message type indicating a syntax of the message body and said message body being described in a syntax indicated by the message type;

a message and action relationship storing part that stores a content of an action that is a reaction to the message and includes instructions defining a processing to be executed by the object, when a message is given, searches for the content of an action corresponding to the given message by using the message body of the given message as a search key; and

an action executing part that executes processing in accordance with the content of an action obtained as a search result by the message and action relationship storing part,

wherein the apparatus further comprises a message type classifying and matching part, the message type classifying and matching part stores a message type dealt with by the message and action relationship storing part, conducts matching processing for determining whether or not a message type of the received message is matched with the message type dealt with by the message and action relationship storing part, and if matched, gives the received message to the message and action relationship storing part.

2. (previously presented) An object collaboration apparatus according to claim 1, wherein classification of the message type has a hierarchy, and a message type header representing the message type contains information representing the hierarchy of the classification of the message type, and

by applying the hierarchy of the classification of the message type, the message type classifying and matching part stores and holds a message type dealt with by the message and

action relationship storing part, analyzes a message type of the received message, and conducts matching of the message type.

3. (original) An object collaboration apparatus according to claim 2, wherein the message type is defined by using an idea of inheritance in object-oriented programming, and the hierarchy of the classification of the message type contains a hierarchy of classification of a class derivation message type and a class derivation origin message type.

4. (currently amended) An object collaboration apparatus operated in accordance with a message and action relationship, comprising:

a message receiving part that allows each object to monitor and capture a message transmitted among objects on a network, ~~said message including a message type and a message body~~ said message type indicating a syntax of the message body and said message body being described in a syntax indicated by the message type;

a message and action relationship storing part that stores a content of an action that is a reaction to the message and includes instructions defining a processing to be executed by the object, when a message is given, searches for the content of an action corresponding to the given message by using the message body of the given message as a search key; and

an action executing part that executes processing in accordance with the content of an action obtained as a search result by the message and action relationship storing part,

wherein the apparatus further includes an entity name rewrite object for, with respect to a message received from one object entity, rewriting object entity name information in a message representing the one object entity to another object entity name information representing another object entity, and returning the message to the network.

5. (previously presented) An object collaboration apparatus according to claim 4, wherein for synchronization processing between objects, action contents desired to be subjected to the synchronization processing are described by using the object entity name to be an entity name rewrite target by the entity name rewrite object, in the message and action relationship storing part of an object to be a slave, and

the entity name rewrite object rewrites the object entity name written as the entity name rewrite target into an object entity name to be a master object of the synchronization processing.

6. (currently amended) A computer-readable recording medium storing a processing program for realizing an object collaboration apparatus operated in accordance with a message and action relationship, the program comprising:

a message receiving processing operation of allowing each object to monitor and capture a message transmitted among objects on a network, ~~said message including a message type and a message body~~ said message type indicating a syntax of the message body and said message body being described on a syntax indicated by the message type;

a message and action relationship storing processing operation of storing a content of an action that is a reaction to the message and includes instructions defining a processing to be executed by the object, when a message is given, searching for the content of an action corresponding to the given message by using the message body of the given message as a search key ;

an action executing processing operation of executing processing in accordance with the content of an action obtained as a search result by the message and action relationship storing processing operation;

a processing operation of storing a message type dealt with in the message and action relationship storing processing operation;

a processing operation of conducting matching processing for determining whether or not a type of the received message is matched with the message type dealt with by the message and action relationship storing processing operation; and

a processing operation of giving the message to the message and action relationship storing part only in a case where the message type of the received message is matched in the matching processing

7. (currently amended) A computer-readable recording medium storing a processing program for realizing an object collaboration apparatus for rewriting an entity name of a message transmitted by one object to an entity name of another object, operated in accordance with a message and action relationship, the program comprising:

a message receiving processing operation of allowing each object to monitor and capture a message transmitted among objects on a network, ~~said message including a message type and a message body~~ said message type indicating a syntax of the message body and said message body being described in a syntax indicated by the message type;

a message and action relationship storing processing operation of storing a content of an action that is a reaction to the message includes instructions defining a processing to be

executed by the object, and, when a message is given, searching for the content of an action corresponding to the given message by using the message body of the given message as a search key;

an action executing processing operation of executing processing in accordance with the content of an action obtained as a search result by the message and action relationship storing processing operation; and

an entity name rewrite processing operation of, with respect to a message received from one object entity, rewriting object entity name information in a message representing the one object entity to another object entity name information representing another object entity, and returning the message to the network.

8. (cancelled)

9. (currently amended) An object collaboration apparatus operated in accordance with a message and action relationship, comprising:

a message receiving part that allows an object to monitor and capture a message transmitted among objects on a network, said message including data required for an action or parameters and being composed of a message type and a message body wherein said message type indicates a syntax of the message body and includes a hierarchical structure of a class derivation original message type and said message body is described in a syntax indicated by the message type and a class derivation message type;

a message and action relationship storing part that stores a content of an action that is a reaction to the message and includes instructions defining a processing to be executed by the object, when a message is given, searching for the content of an action corresponding to the given message by using the message body of the given message as a search key; and

an action executing part that executes processing in accordance with the contents of the action.

10. (currently amended) An object collaboration method operated in accordance with a message and action relationship, comprising:

monitoring and capturing a message transmitted on a network, ~~said message including a message type and a message body~~ said message type indicating a syntax of the message body and said message body being described by a syntax indicated by the message type; and

determining whether a type of the captured message matches a particular message type, and when a match occurs, executing an action corresponding to the message including instructions defining processing to be executed by the object;

wherein communication between objects on the network occurs without specifying a destination object in said message.